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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,844

12/07/2005

Nobuyuki Ishikawa

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EXAMINER

YEE, DEBORAH

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/559,844		ISHIKAWA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Deborah Yee		1793	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 25-48 is/are pending in the application.
- 4a) Of the above claim(s) 35-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/7/05</u>   | 6) <input type="checkbox"/> Other: ____                           |

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 25-34, drawn to hot rolled steel plate and its product, a welded steel pipe.

Group II, claim(s) 35-48, drawn to method of producing steel product by hot rolling, rapid cooling to 450-650C, rapid reheating to 550-750C, and additionally cold working and welding to form pipe.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The common technical feature that groups I and II share is the composition of claim 1. This composition does not provide a contribution over the prior art as evident by US Patent 5,755,895. Thus, the 2 groups lack unity of invention. See MPEP 1850.

3. During a telephone conversation with Mr. Dan Christenbury on December 10, 2007 a provisional election was made with traverse to prosecute the invention of Group I, claims 25-34. Affirmation of this election must be made by applicant in replying to this Office action. Claims 35-48 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 25-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,755,895 (Tamehiro et al.).

7. Tamehiro et al. in claims 1 to 12 of columns 17-20 discloses a hot rolled steel plate having a composition with constituents whose wt% ranges overlap those recited by the claims; such overlap establishes a prima facie case of obviousness since it would be obvious for one skilled in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior art because the prior art teaches the same utility (welded pipe for transporting oil or gas) and similar properties of high tensile strength, low yield ratio, and low-temperature toughness. In addition, steel of Tamehiro et al. exhibits microstructure comprising ferrite, bainite and martensite, whereby ferrite fraction is 20 to 90%, which would overlap and suggest Applicants' microstructure comprising ferrite, bainite and 3-20% martensite.

8. More specifically, prior art steel example 8 in table 3 of columns 13-14 meets the claimed composition and when calculated, satisfies condition (2) recited by claims 25 and 30 wherein atomic% = 0.37%C-0.01% Ti- 0.14%Mo-0.01%Nb-0.07% V and

condition (2)=  $0.37 / (0.01 + 0.14 + 0.01 + 0.07) = 1.6$  within the range of 1.2 to 3. In addition, steel example 8 has a  $C / (Mo + Ti) = 2.466$  with the range of 1.2 to 3 recited by claim 26; and  $C / (Ti + Nb + V) = 4.1$  closely approximate 1.2 to 3 recited by claim 27.

9. Also similar to present invention, steel 8 contains 0.01% Ti and 0.0008% B and  $Ti/N = 5.88$  that meet the compositional limitations recited by claims 31 to 33, and said steel is used to make welded pipe which meets recited claim 34.

10. Even though prior art does not teach complex carbides precipitated in the ferrite phase as recited by claim 8, such would be expected since composition and property limitations are closely met and in absence of proof to the contrary.

11. Claims 25, 26 and 28 to 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 08-209287 (Asahi et al.).

12. The English abstract of Asahi et al. discloses a hot rolled steel plate having a composition with constituents whose wt% ranges overlap or closely approximate those recited by the claims; such similarities establishes a prima facie case of obviousness since it would be obvious for one skilled in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior art because the prior art teaches the same utility (welded pipe for transporting oil or gas) and similar properties of high tensile strength, low yield ratio, and low-temperature toughness. In addition, steel of Asahi et al. exhibits microstructure comprising ferrite, bainite and martensite, whereby ferrite fraction is 20 to 90%, which would overlap and suggest Applicants' microstructure comprising ferrite, bainite and 3-20% martensite.

13. More specifically, prior art steel example 3 in table 2 of columns 7-8 meets the claimed composition and when calculated satisfies condition (2) recited by claims 25 and 30 wherein  $\text{atomic\%} = 0.37\% \text{C} - 0.02\% \text{Ti} - 0.23\% \text{Mo} - 0.02\% \text{Nb}$  and condition (2) =  $0.37 / (0.02 + 0.23 + 0.02) = 1.37$  within the range of 1.2 to 3. In addition, steel example 8 has a  $\text{C} / (\text{Mo} + \text{Ti}) = 1.48$  within the range of 1.2 to 3 recited by claim 26.

14. Also similar to present invention, steel 3 contains 0.014% Ti, 0.5%Ni, 0.83%Cu and  $\text{Ti/N} = 4.28$  that meet or closely meet the compositional limitations recited by claims 31 to 33, and said steel is used to make welded pipe which meets recited claim 34.

15. Even though prior art does not teach complex carbides precipitated in the ferrite phase as recited by claim 8, such would be expected since composition and property limitations are closely met and in absence of proof to the contrary.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/  
Primary Examiner  
Art Unit 1793

/DY/